Presentation to

IBM Corporation
on

Intermediate-Sized Internal Systems Utilized by Information Services Vendors

by INPUT

April 29, 1988

AGENDA

- Objectives and Methodology
- Sample Characteristics
- Summary Conclusions and Recommendations
- Buying Motives
- Manufacturers' Relative Strengths and Weaknesses
- Comparative Importance and Satisfaction Ratings
- Comments from Vendors
- Applications in Use
- Future Purchase Intentions

OBJECTIVES

- Determine Information Services (IS) Firms' Buying Motives in Selecting Internal Systems of Intermediate Size ($20,000-$1,000,000)
- Measure Market Presence, Strengths, and Weaknesses for HP, DEC, and IBM in This Specific Submarket
- Measure IS Vendors' Relative Satisfaction and Importance Ratings for Their Internal Systems
- Determine Most-Important Internal Applications Being Performed
- Measure IS Vendors' Future Buying Intentions
- Determine Reasons for IS Vendors Continuing to Purchase from HP, DEC, and IBM; Also Determine Their Reasons for Changing Manufacturers
- Recommend Actions for IBM to Increase Market Penetration

PROJECT METHODOLOGY

- Survey Design/Approval, with IBM
- Random Telephone Surveys (120 Target). Concentration on Vendors Who Gave IBM Serious Consideration
- Target Minimum Numbers of Processing Services, Turnkey Systems, and Software Products Firms, by Three Size Groups
  - Small: <$10 M Revenues
  - Large: $10M-100M Revenues
  - Very Large: >$100 M Revenues
- Initial Feedback/Analysis
- Nonrandom Telephone Surveys: Focus on DEC/HP Users
- Tabulation
- Analysis/Recommendations

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SAMPLE CHARACTERISTICS

157 Random Telephone Interviews

A.

33 Mainframe Users	85 Completed Interviews		39 "IBM Not Seriously Considered" Interviews	
	IBM	46	DEC	20
	DEC	12	HP	6
	HP	8	Others	13
	Others	19		

B.

46
Subsequent Focus on
Additional DEC (21)
and HP(25)

C.

Final Results

108 Completed Interviews		62 "IBM Not Seriously Considered" Interviews		=	170 Total Interviews	
IBM	46	DEC	28		IBM	46
DEC	25	HP	21		DEC	53
HP	18	Others	13		HP	39
Others	19				Others	32
						170

INTERVIEW MATRIX: COMPLETED INTERVIEWS

Company Type	Company Size			Total
	Very Large >$100M	Large $10-100M	Small <$10M	
Processing Services	t 10 a 10	t 20 a 14	t 15 a 30	t 45 a 54
Software House	t 10 a 6	t 20 a 21	t 15 a 12	t 45 a 39
Turnkey System	t 10 a 6	t 10 a 8	t 10 a 1	t 30 a 15
TOTALS	t 30 a 22	t 50 a 43	t 40 a 43	t 120 a 108

t = Target
a = Actual

INTERVIEW MATRIX:
COMPLETED INTERVIEWS, PLUS
"IBM NOT SERIOUSLY CONSIDERED"

Company Type	Company Size			Total
	Very Large >$100M	Large $10-100M	Small <$10M	
Processing Services	t 10 a 10	t 20 a 19	t 15 a 40	t 45 a 69
Software House	t 10 a 9	t 20 a 33	t 15 a 29	t 45 a 71
Turnkey System	t 10 a 9	t 10 a 17	t 10 a 4	t 30 a 30
TOTALS	t 30 a 28	t 50 a 69	t 40 a 73	t 120 a 170

t = Target
a = Actual

INTERVIEW MATRIX, VENDOR POPULATION (N = 89)

Completed Interviews (Random Only)

Company Type	Company Size ($M Revenues)			
	Very Large >$100M	Large $10-100M	Small <$10M	Totals
Processing Services	DEC 5 HP 1 IBM 4	DEC 1 HP -- IBM 7	DEC 6 HP 6 IBM 13	DEC 12 HP 7 IBM 24
Software Products	DEC 2 HP -- IBM 2	DEC 1 HP 4 IBM 13	DEC 4 HP 6 IBM 1	DEC 7 HP 10 IBM 16
Turnkey Systems	DEC 2 HP 1 IBM 3	DEC 3 HP -- IBM 3	DEC 1 HP -- IBM --	DEC 6 HP 1 IBM 6
TOTALS	DEC 9 HP 2 IBM 9	DEC 5 HP 4 IBM 23	DEC 11 HP 12 IBM 14	DEC 25 HP 18 IBM 46 89

INTERVIEW MATRIX, VENDOR POPULATION (N = 138)

Completed Interviews, Plus "IBM Not Seriously Considered" Responses

Company Type	Company Size ($M Revenues)			
	Very Large >$100M	Large $10-100M	Small <$10M	Totals
Processing Services	DEC 5 HP 1 IBM 4	DEC 3 HP 2 IBM 7	DEC 9 HP 10 IBM 13	DEC 17 HP 13 IBM 24
Software Products	DEC 5 HP 0 IBM 2	DEC 8 HP 8 IBM 13	DEC 10 HP 15 IBM 1	DEC 23 HP 23 IBM 16
Turnkey Systems	DEC 2 HP 3 IBM 3	DEC 8 HP 0 IBM 3	DEC 3 HP 0 IBM --	DEC 13 HP 3 IBM 6
TOTALS	DEC 12 HP 4 IBM 9	DEC 19 HP 10 IBM 23	DEC 22 HP 25 IBM 14	DEC 53 HP 39 IBM 46 138

FUTURE PURCHASE INTENTIONS

Percent of respondents planning to buy or upgrade internal systems from current manufacturer in the future		
Manufacturer Currently Used	Will Buy In 12 months (Percent)	Will Buy In 36 months (Percent)
DEC (53)	34	32
HP (39)	31	36
IBM (46)	41	35

PRIMARY INSTALLED SYSTEMS

	Responses
DEC	
• VAX 730, 570, 780	26
• Microvax 2, 2000	11
• VAX 80XX	9
• PDP 11/70	6
• KL10	1
	53
HP	
• 3000	38
• 930	1
	39
IBM	
• 4331, 4341	14
• System 36	10
• 4381	8
• System 38	8
• 9370	4
• System 34	1
• PS/2	1
	46

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INFORMATION SYSTEMS VENDORS USING MULTIPLE-MFG'S INTERMEDIATE SYSTEMS FOR INTERNAL USE

Manufacturer of Primary Internal System	Number of Sites Using Another Mfg.	% of Sites Using More Than One Mfg.
IBM (46)	DEC 4 HP 2 Other 12 Total 18	39
DEC (53)	IBM 4 HP 2 Other 8 Total 14	26
HP (39)	IBM 1 DEC 1 Other 5 Total 7	18

CONCLUSIONS

- Turnkey systems and software companies select internal systems to match clients' support/development needs and preferences.
- Processing services firms face a major task in changing equipment vendors. Porting client bases and software transparently is technically demanding.
- There are strong pressures on all IS firms to remain compatible with their current internal and client systems.
- DEC and HP are quality vendors whose "Satisfaction" ratings from customers are comparable to IBM's rating, with a few exceptions.
- Leverage through placement of IS firms' internal systems is significant. In software/turnkey firms, larger numbers of IS client systems can follow.
- IBM has a significantly higher ratio of respondents who will purchase in the future to those who will not.
- IBM has a better outlook than DEC or HP for 12-month purchases from current IS vendors.

RECOMMENDATIONS

- Focus on attracting VARS & IRs from DEC & HP ranks.
- Use 9370 and Silverlake as vehicles to attract midrange DEC VAX and HP 3000 IS companies.
- Introduce marketing/development incentives to entice HP/DEC loyalists to seriously consider a change:
  - Loaned or inexpensively priced development systems
  - Support from IBM sales force
  - Discounting for VARs
  - Program conversion aids
  - Strong promotions and marketing programs to aid IS firms in launching IBM-based software products and services.
- These programs should take advantage of perceived DEC/HP weak spots.

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REASONS INFORMATION SYSTEMS COMPANIES BUY INTERNAL SYSTEMS FROM MANUFACTURERS

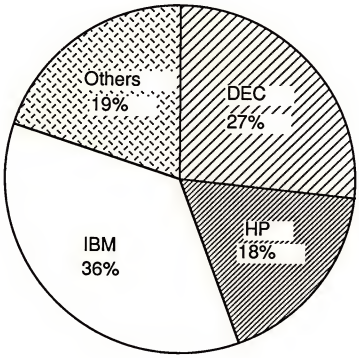
	% of Responses for This Manufacturer
IBM	
• Reliability	15
• Vendor Support	11
• Compatibility—Internal	14
• Compatibility—Clients	11
• Expansion Capability	10
DEC	
• Compatibility—Clients	17
• Compatibility—Internal	16
• Price Performance	15
HP	
• Compatibility—Internal	16
• Compatibility—Clients	14
• Reliability	14
• Migration & Expansion	11

MOST IMPORTANT BUYING REASONS FOR INTERNAL SYSTEMS

Category	Responses per Manufacturer (Percent)		
	DEC (139)	HP (105)	IBM (132)
Price Performance	15	4	8
Performance	6	8	5
Price	2	2	6
Reliability	9	14	15
Vendor Support	7	6	11
Vendor Software	5	1	5
Compatibility with Existing Internal Systems	16	16	14
Compatibility with Systems Sold to Your Customer	17	14	11
Price Discounts	1	2	2
Migration Path	8	11	4
Expansion Capability	8	11	10
Third-Party Software	4	5	3
Vendor Reputation	4	5	5

MANUFACTURERS SERIOUSLY CONSIDERED BY INFORMATION SERVICES FIRMS IN MAKING LAST (NEXT) COMPUTER SELECTION:

Responses from Total Survey
N=335



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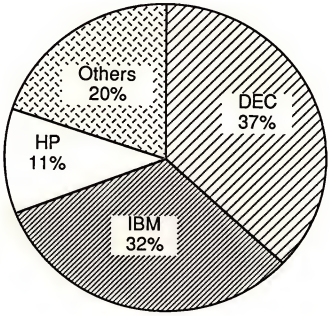
MANUFACTURERS SERIOUSLY CONSIDERED BY INFORMATION SERVICES VENDORS IN MAKING LAST (NEXT) INTERNAL COMPUTER SELECTION

Response from DEC Internal System Users
N=65



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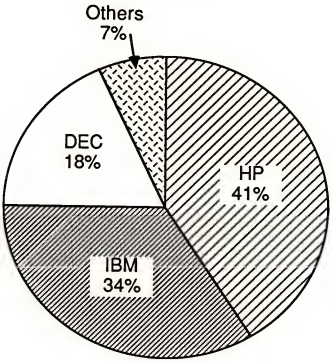
MANUFACTURERS SERIOUSLY CONSIDERED BY INFORMATION SYSTEMS VENDORS IN MAKING LAST (NEXT) INTERNAL COMPUTER SELECTION

Response from HP Internal Systems Users
N=44



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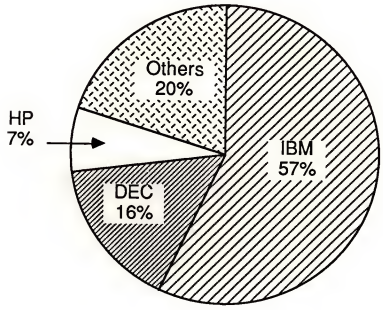
MANUFACTURERS SERIOUSLY CONSIDERED BY INFORMATION SERVICES FIRMS IN MAKING LAST (NEXT) INTERNAL COMPUTER SELECTION

Response form IBM Internal Systems Users
N=86



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OTHER MANUFACTURERS SERIOUSLY CONSIDERED IN INFORMATION SERVICES FIRMS' BUYING DECISIONS

Vendor	Number of Responses
NAS	3
Amdahl	3
Unisys	2
Wang	2
Apple	2
Sun	1
Prime	1
Tandem	1
Honeywell	1

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Q: UNDER WHAT CONDITIONS WOULD YOU CONSIDER INTERNAL SYSTEMS VENDORS OTHER THAN THOSE YOU NAMED?

DEC Responses	# of Responses
• PCs Cause System Obsolescence	2
• Client Software Compatibility	2
• Better Application Package	1
• Superior Architecture	1
• Service at Cheaper Price	1
• Move to Distributed Processing, DEC as File Server for SUN WS	1
HP Responses	
• Client Software Compatibility	6
• Move to PCs	2
• Better Price Performance	1

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INFORMATION SYSTEMS FIRMS' OVERALL SATISFACTION RATINGS FOR INTERNAL SYSTEM

(0-10 Scale, 0 = Least Satisfied, 10 = Most Satisfied)

	Rating	Std. Deviation	Std. Error
IBM (39)	8.0	1.74	0.28
DEC (37)	7.7	1.59	0.26
HP (31)	8.1	1.37	0.24

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INFORMATION SYSTEMS FIRMS' SATISFACTION RATINGS FOR INTERNAL SYSTEMS

Scale of 0-10: 0=Very Unimportant, 10=Very Important

Vendor	Sales Support	Tech. Staff Support	Equip. Maint.	Software Maint.
IBM (46)	7.2	7.2	8.1	7.0
DEC (42)	6.1	6.8	7.7	7.1
HP (33)	6.8	7.8	9.0	7.5

Std. Error Ranges:

DEC	0.26-0.43
HP	0.18-0.38
IBM	0.17-0.33

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INFORMATION SERVICES FIRMS' SATISFACTION RATINGS FOR INTERNAL SYSTEMS

Scale of 0-10: 0=Very Unimportant, 10=Very Important

Vendor	Price Perform.	Migration	Expansion	Ease of Use
IBM (46)	7.5	7.2	7.2	7.4
DEC (42)	7.4	7.8	7.7	7.4
HP (33)	7.3	8.6	8.3	8.0

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INFORMATION SERVICES FIRMS' SATISFACTION RATINGS FOR INTERNAL SYSTEMS

Scale of 0-10: 0=Very Unsatisfied, 10=Very Satisfied

Vendor	Networking	Software Avail.	Equip. Avail.	Reliability
IBM (46)	7.4	7.8	7.3	8.9
DEC (42)	8.1	7.0	7.1	8.7
HP (33)	7.6	7.1	7.9	9.4

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INFORMATION SERVICES FIRMS' IMPORTANCE RATINGS FOR INTERNAL SYSTEMS

Scale of 0-10: 0=Very Unimportant, 10=Very Important. Results Rounded to Nearest Whole Number.

Vendor	Sales Support	Tech. Staff Support	Equip. Maint.	Software Maint.
IBM (46)	7	8	9	8
DEC (42)	7	8	8	7
HP (33)	7	9	9	7

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INFORMATION SERVICES FIRMS' IMPORTANCE RATINGS FOR INTERNAL SYSTEMS

Scale of 0-10: 0=Very Unimportant, 10=Very Important. Results Rounded to Nearest Whole Number.

Vendor	Networking	Software Avail.	Equip. Avail.	Reliability
IBM (46)	8	7	9	8
DEC (42)	8	7	9	8
HP (33)	8	6	10	8

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INFORMATION SERVICES FIRMS' IMPORTANCE RATINGS FOR INTERNAL SYSTEMS

Scale of 0-10: 0=Very Unimportant, 10=Very Important. Results Rounded to Nearest Whole Number.

Vendor	Price Perform.	Migration	Expansion	Ease of Use
IBM (46)	8	7	8	8
DEC (42)	8	8	8	7
HP (33)	7	8	8	8

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ELEMENTS OF GREATEST SATISFACTION TO INFORMATION SERVICES VENDORS, IN INTERNAL SYSTEMS USAGE

DEC (53)

- Migration Capability (11)
- Reliability (6)
- Expansion Capability (4)
- Price Performance (4)

HP (39)

- Reliability (9)
- Migration Capability (5)
- Networking (4)
- Technical Staff Support (4)

IBM (46)

- Equipment Maintenance (8)
- Reliability (8)
- Software Availability (5)
- Ease of Use (4)

ELEMENTS OF GREATEST DISSATISFACTION TO INFORMATION SERVICES VENDORS, IN INTERNAL SYSTEMS USAGE

DEC (53)

- Sales Support (13)
- Price Performance (4)
- Software Availability (4)
- Ease of Use (4)

HP (39)

- Sales Support (6)
- Networking Capability (5)
- Software Availability (4)

IBM (46)

- Sales Support (7)
- Migration Capability (5)
- Software Maintenance Support (5)

ELEMENTS OF GREATEST IMPORTANCE TO INFORMATION SERVICES VENDORS, IN INTERNAL SYSTEMS USAGE

DEC (53)

- Sales Support (9)
- Technical Staff Support (6)
- Networking (6)
- Expansion Capability (5)

HP (39)

- Technical Staff Support (6)
- Migration Capability (6)
- Networking Capability (6)

IBM (46)

- Reliability (6)
- Technical Staff Support (4)
- Networking Capability (4)
- Software Availability (4)

ELEMENTS OF LEAST IMPORTANCE TO INFORMATION SERVICES VENDORS, IN INTERNAL SYSTEMS USAGE

DEC (53)

- Sales Support (13)
- Software Availability (8)
- Software Maintenance Support (4)

HP (39)

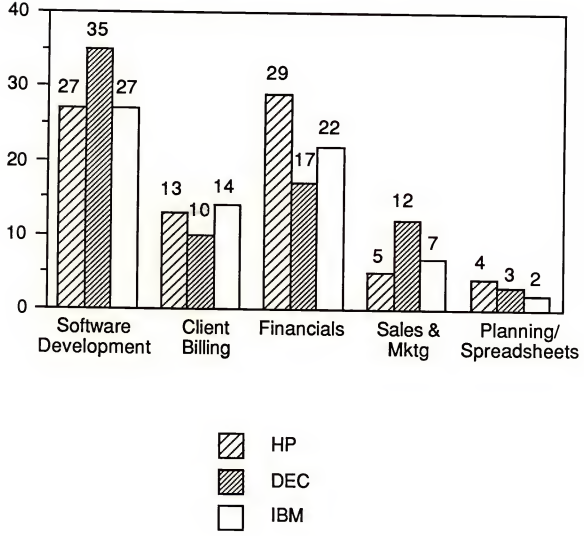
- Software Availability (7)
- Software Maintenance (6)

IBM (46)

- Sales Support (10)
- Networking (6)
- Migration Capability (4)

MOST IMPORTANT APPLICATION BEING PERFORMED ON INFORMATION SERVICES FIRMS' INTERNAL SYSTEMS

Percent of Respondents, by Vendor



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OTHER APPLICATIONS BEING PERFORMED ON INFORMATION SERVICES FIRMS' INTERNAL SYSTEMS

DEC	% of Responses
• Word Processing	3
• Seismic Data Processing	2
• Client Processing	2
HP	
• Manufacturing Systems	4
• Utility Timesharing	4
• Office Automation	2
IBM	
• Manufacturing Systems	3
• Client Processing	2
• Insurance Claims	2

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SOURCES OF INTERNAL APPLICATIONS

	Responses (Percent)			
	Internal Develop.	Software Package	Custom Software	Equipment Manuf.
DEC (50)	80	18	2	-
HP (45)	71	29	-	-
IBM (62)	65	29	3	3
Total Survey	71	25	3	2

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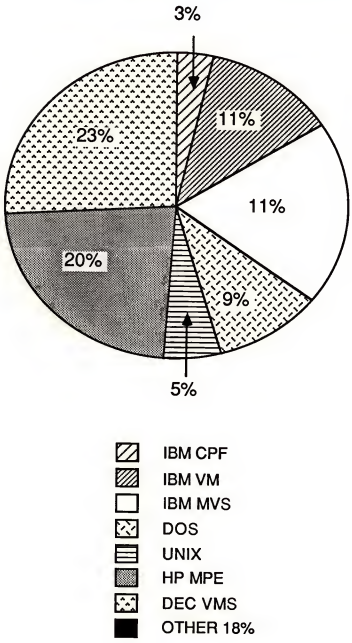
OPERATING SYSTEMS IN USE; INFORMATION SERVICES FIRMS' INTERNAL SYSTEMS



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SOURCES OF INTERNAL SYSTEMS

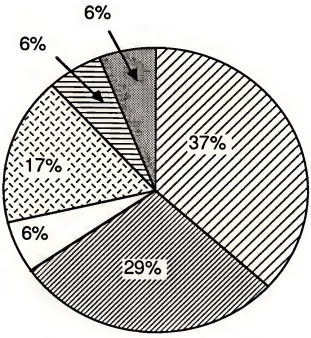
Number of Responses				
Vendor Name	Manufacturer	Dealer	VAR	Broker
DEC (51)	37	9	1	4
HP (33)	27	3	2	1
IBM (50)	32	9	1	8
	96	21	4	13

INFORMATION SYSTEMS VENDORS' COMPLEMENTARY RELATIONSHIPS WITH MANUFACTURERS OF THEIR INTERNAL SYSTEMS

	Responses (Percent)				
	VAR	IMAP	Distributor	OEM	Total
DEC (53)	8	-	2	15	25
HP (39)	31	-	-	5	36
IBM (49)	27	8	-	2	37

REASONS FOR INFORMATION SERVICES COMPANIES CONTINUING TO PURCHASE FROM DEC

N=35



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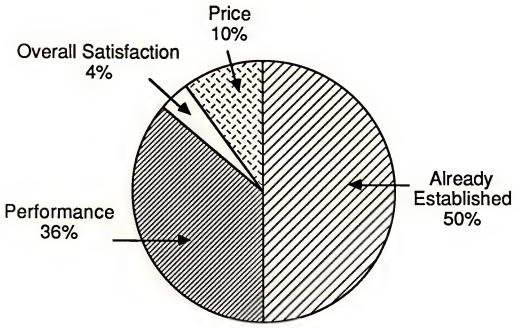
REASONS FOR INFORMATION SERVICES COMPANIES CONTINUING TO PURCHASE FROM HP

N=30



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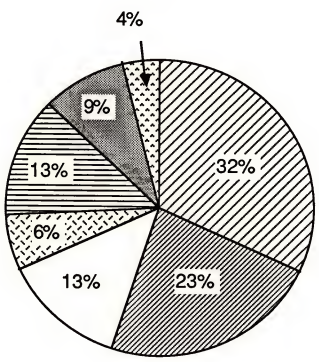
REASONS FOR INFORMATION SERVICES COMPANIES CONTINUING TO PURCHASE FROM IBM

N=47



- Already Established on This Equipment
- Performance
- Service & Support
- Overall Satisfaction
- Price (Third Party)
- Vendor Reputation
- Price Performance

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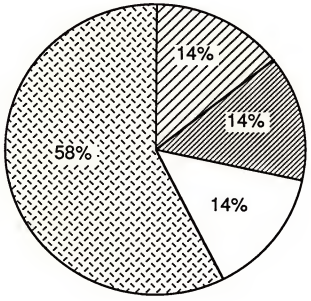
REASONS FOR INFORMATION SERVICES COMPANIES PLANNING TO CHANGE FROM IBM FOR INTERNAL SYSTEMS

N = 7



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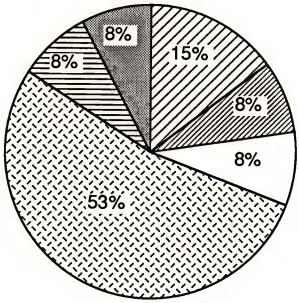
REASONS FOR INFORMATION SYSTEMS COMPANIES PLANNING TO CHANGE FROM DEC FOR INTERNAL SYSTEMS

N=13



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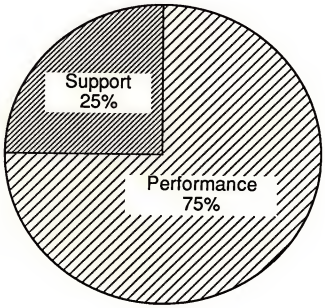
REASONS FOR INFORMATION SYSTEMS COMPANIES PLANNING TO CHANGE FROM HP FOR INTERNAL SYSTEMS

N=4



INFORMATION SERVICES COMPANIES PLANNING TO CONTINUE/NOT CONTINUE TO PURCHASE FROM CURRENT MANUFACTURER

Number of Responses			
Manufacturer	Will Cont.	Will Not Cont.	Ratio, Will:Will Not Continue
DEC	35	10	3.5
HP	31	4	7.8
IBM	48	3	16.0